

INFORMATION DISCLOSURE
CITATION

ATTY. DOCKET NO.

DIVISIONAL OF SERIAL NO.

160-386

10/292,583

APPLICANT

NAKAMURA et al

(Use several sheets if necessary)

FILING DATE

GROUP

July 1, 2003

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
RAK	5,369,289	11/1994	Tamaki			
RAK	5,247,533	9/1993	Okazaki et al			
RAK	4,495,514	1/1985	Lawrence et al			
RAK	5,281,830	1/1994	Kotaki et al			
RAK	4,153,905	5/1979	Charmakadze et al			
RAK	5,285,078	2/1994	Mimura et al			

FOREIGN PATENT DOCUMENTS

DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
03-218625	9/1991	Japan			abs
05-013812	1/1993	Japan			abs
51-85384	7/1976	Japan			abs
56-81986	7/1981	Japan			abs
61-144659	9/1986	Japan			abs
63-61161	4/1988	Japan			abs
61-87381	5/1986	Japan			abs
02-229475	9/1990	Japan			abs
59228776	12/1984	Japan			abs
55009442 A	1/1980	Japan			abs
1990-0701577	7/1990	Korea			abs
5-211347	8/1993	Japan			
3-183173	8/1991	Japan			
4-68579	3/1992	Japan			
5-129658	5/1993	Japan			
57-111076	7/1982	Japan			
5-13816	1/1993	Japan			
62-2675	1/1987	Japan			
62-287675	12/1987	Japan			
83103775	4/1994	Taiwan			
7-45867	2/1995	Japan			
5-291621		Japan			
5-129658	5/93	Japan			
0-483 688 A3	5/92	Europe			
0-483 688 A2	5/92	Europe			
228776	12/84	Japan			
57-45272	3/82	Japan			

*Examiner

Rebecca N. Ruchman

Date Considered

2/19/2004

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)

INFORMATION DISCLOSURE
CITATION

ATTY. DOCKET NO.

DIVISIONAL OF SERIAL NO.

160-386

10/292,583

APPLICANT

NAKAMURA et al

(Use several sheets if necessary)

FILING DATE

GROUP

July 1, 2003

FOREIGN PATENT DOCUMENTS (cont)

	6-38265	5/94	Japan
	59-228776	12/84	Japan
	62-101090	5/87	Japan
	10-0225612	7/99	Korea
	2-68968	3/90	Japan
	5-13846	1/93	Japan

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

	Oyo Buturi Vol. 60, No. 2, 1991 02; p. 164
	Hayes et al Proceedings of Symposium B 1990 Extended Abstracts EA-21 Electronic Optical and Device Properties of Layered Structures
	Amano et al Japanese Journal of Applied Physics Vol. 28 No. 12, 1989 L2112-L2114 P-Type Conduction in Mg-Doped GaN Treated with Low-Energy Electron Beam Irradiation (LEEBI)
	Nakamura et al Jpn J. Appl. Phys. Vol. 31 (1992) pp 1258-1266 Hole Compensation Mechanisms of P-Type GaN Films Dept. Of Electrical Engineering
	Su et al Jpn. J. Applied Physics Vol. 30 No. 5, May 1991 914-916 Ohmic Contacts AuGeNi etc.
	Amano et al Inst. Phys. Conf. Ser. No. 106: Chapter 10 pp 725-730 UV and blue electroluminescence etc.
	Memoirs of the Faculty of Engineering, Nagoya University, Vol. 43, No. 2, 1991 Mowpe Growth of GaN etc.
	Williams Modern GaAs Processing Method, 1990 p. 219
	Lin et al Appl. Phys. Lett 64(8), Feb. 1994 pp 1003-1005 Low Resistance ohmic contacts on wide band-gap GaN
	Khan et al Appl. Phys. Lett 61 (15) 4/1993 pp. 1786-1787 Metal semiconductor field effect transistor based on single crystal GaN
	Japanese KOKAI publication list of patents containing key words "Ni" and "electrode"
	Goldenberg et al "Ultraviolet and violet light-emitting..." Appl. Phys. Letts. 62 (1993), 25 Jan. No. 4, pp 381-383
	Foresi et al "Metal contacts to gallium nitride" Appl. Phys. Letts 62 (1993) 31 May No. 22, pp. 2859-2861
	Akasaki et al "High efficiency UV..." Proc. of the SPIE, Phys. Concepts of Materials...28 Oct. 1990, Aachen, DE, pp 138-149
	Khan et al "Metal semiconductor field effect..." Appl. Phys. Letts 62 (15), 12 april 1993, pp. 1786-1787
	Nakamura et al "High-power InGaN/GaN..." Appl. Phys. Letts. 62 (19) 10 May 1993 pp 2390-2392
	H. Morkoc et al "Large-band-gap SiC..." J. Phys. 76(3), 1 Aug. 1994 pp 1363-1398
	Patent Abstracts of Japan, vol 18 no 80 (E-1505) 9 Feb 1994 & JP-A-05 291 621 (Nichia Chem Inc Ltd.) 5 Nov. 1993 (see abstract).
	Database WPI, Week 9444, Derwent Publications Ltd. London, GB AN 94-352820 & JP A-6 275 868 (Nichia Kagaku Kogyo KK) 20 Sept. 1994, see abstract
	Database WPI, Week 9438, Derwent Publications Ltd. London GV An 94-308360 & JP A 6 237 012 (Nichia Kagaku Kogyo KK) 23 Au. 1994, see abstract

*Examiner

Rebecca A. Rochford

Date Considered

2/19/2004

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)